Lake Jackson Lake Vegetation Index Results (9-5-2016)

The Lake Vegetation Index (LVI) is a multimetric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units (Figure 1). Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

Aquatic life use category	LVI Range	Description
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less that 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake Jackson was 52, placing the lake's vegetative community in the healthy category.

Seventy eight species were found during the survey. The native species, fragrant waterlily (*Nymphaea odorata*), American lotus (*Nelumbo lutea*), fanwort (*Cabomba caroliniana*) were the most dominant species in the lake. Other native vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and coastal plain willow (*Salix carolina*).

Unfortunately, Chinese tallow tree (*Sapium sebiferum*), wild taro (*Colocasia esculenta*), torpedo grass (*Panicum repens*), wild taro (*Colocasia esculenta*) and water hyacinth (*Eichhornia crassipes*), are listed as Category I Invasive Exotics by the Florida Exotic Pest Control Council http://www.fleppc.org/ and were found in Lake Jackson. Alligator weed (*Alternanthera philoxeroides*) and rattlebox (*Sesbania punicea*) and Chinese wisteria (*Wisteria sinensis*) are Category II Invasive Exotics found in the lake. Additionally, the exotic water spangles (*Salvinia minima*), parrot feather milfoil (*Myriophyllum aquaticum*), burhead sedge (*Oxycaryum cubense*) and vaseygrass (*Paspalum urvillei*) were found in and near the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Jackson LVI survey (9-5-16). Names in bold are exotics I - Category I Invasive Exotics II - Category I Invasive Exotics.

Species Name	Common Name
Acer rubrum	red maple
Alternanthera philoxeroides(II)	alligator weed
Ampelopsis arborea	peppervine
Bacopa caroliniana	lemon bacopa
Bidens discoidea	small beggartick
Bidens laevis	smooth beggartick
Brasenia schreberi	watershield
Cabomba caroliniana	fanwort
Cephalanthus occidentalis	buttonbush
Ceratophyllum demersum	coontail
Colocasia esculenta (I)	wild taro
Cyperus cuspidatus	coastplain flatsedge
Cyperus surinamensis	tropical flatsedge
Cyrilla racemiflora	swamp titi
Diospyros virginiana	common persimmon
Eclipta alba (E. prostrata)	false daisy
Eichhornia crassipes (I)	water hyacinth
Eleocharis baldwinii	road-grass
Eupatorium capillifolium	dogfennel
Fuirena scirpoidea	southern umbrella sedge
Hibiscus moscheutos	crimson-eyed rosemallow
Hibiscus sp.	rosemallow
Hibiscus moscheutos	crimson-eyed rosemallow
Hydrocotyle sp.	water pennywort
Hygrophila polysperma	dwarf hygrophila
Hypericum brachyphyllum	coastal plain St. Johns wort
Hypericum gymnanthum	clasping leaf St. Johns wort
Ipomoea sp.	morning glories
Juncus effusus	common rush
Limnobium spongia	frog's bit
Liquidamber styraciflua	American sweetgum
Ludwigia arcuata	needleleaf ludwigia
Ludwigia decurrens	wingleaf primrose willow
Ludwigia leptocarpa	anglestem primrose willow
Ludwigia suffruticosa	shrubby primrose willow
Lycopus rubellus	taperleaf water horehound
Micranthemum umbrosum	baby tears
Mikania scandens	climbing hempvine
Myrica cerifera	wax myrtle

Species Name	**Common Name**
Myriophyllum aquaticum	parrot feather watermilfoil
Nelumbo lutea	American lotus
Nuphar sp.	spatterdock
Nymphaea odorata	fragrant waterlily
Nymphoides aquatica	banana lilly
Oxycaryum cubense	burhead sedge
Panicum hemitomon	maidencane
Panicum repens(I)	torpedo grass
Paspalum urvillei	vaseygrass
Pinus taeda	loblolly pine
Pluchea baccharis	rosy camphor weed
Polygonum densiflorum (glabrum)	denseflower knotweed
Polygonum hirsutum	hairy smartweed
Polygonum hydropiperoides	swamp smartweed
Polygonum punctatum	dotted smartweed
Pontederia cordata	pickerelweed
Quercus nigra	water oak
Quercus virginiana	southern live oak
Rhynchospora inundata	narrowfruit horned beaksedge
Ricciocarpus natans	purple-fringed riccia
Sacciolepis striata	American cupscale-grass
Sagittaria latifolia	broadleaf arrowhead
Salix carolina	coastal plain willow
Salix nigra	black willow
Salvinia minima	water spangles
Sambucus canadensis subsp. *nigra*	American elderberry
Sapium sebiferum (I)	Chinese tallow tree
Scirpus cyperinus	woolgrass
Sesbania punicea(II)	rattlebox
Smilax sp.	greenbrier
Solidago fistulosa	pine barren goldenrod
Taxodium ascendens	pond cypress
Taxodium distichum	bald cypress
Triadenum virginicum	marsh st. johnswort
Utricularia biflora (U. gibba)	humped bladderwort
Utricularia floridana	Florida yellow bladderwort
Utricularia foliosa	leafy bladderwort
Utricularia purpurea	eastern purple bladderwort
Vitis rotundifolia	muscadine
Wisteria sinensis (II)	Chinese wisteria
Xyris sp.	yelloweyed grass

For additional information about the LVI please go to the Florida Department of Environmental Protection webpage; http://www.dep.state.fl.us/water/sas/training/docs/lvi_primer.pdf. For additional information about exotic Category I and Category II invasive exotic plants, please go to the Florida Exotic Pest Plant Council http://www.fleppc.org/list/list.htm.

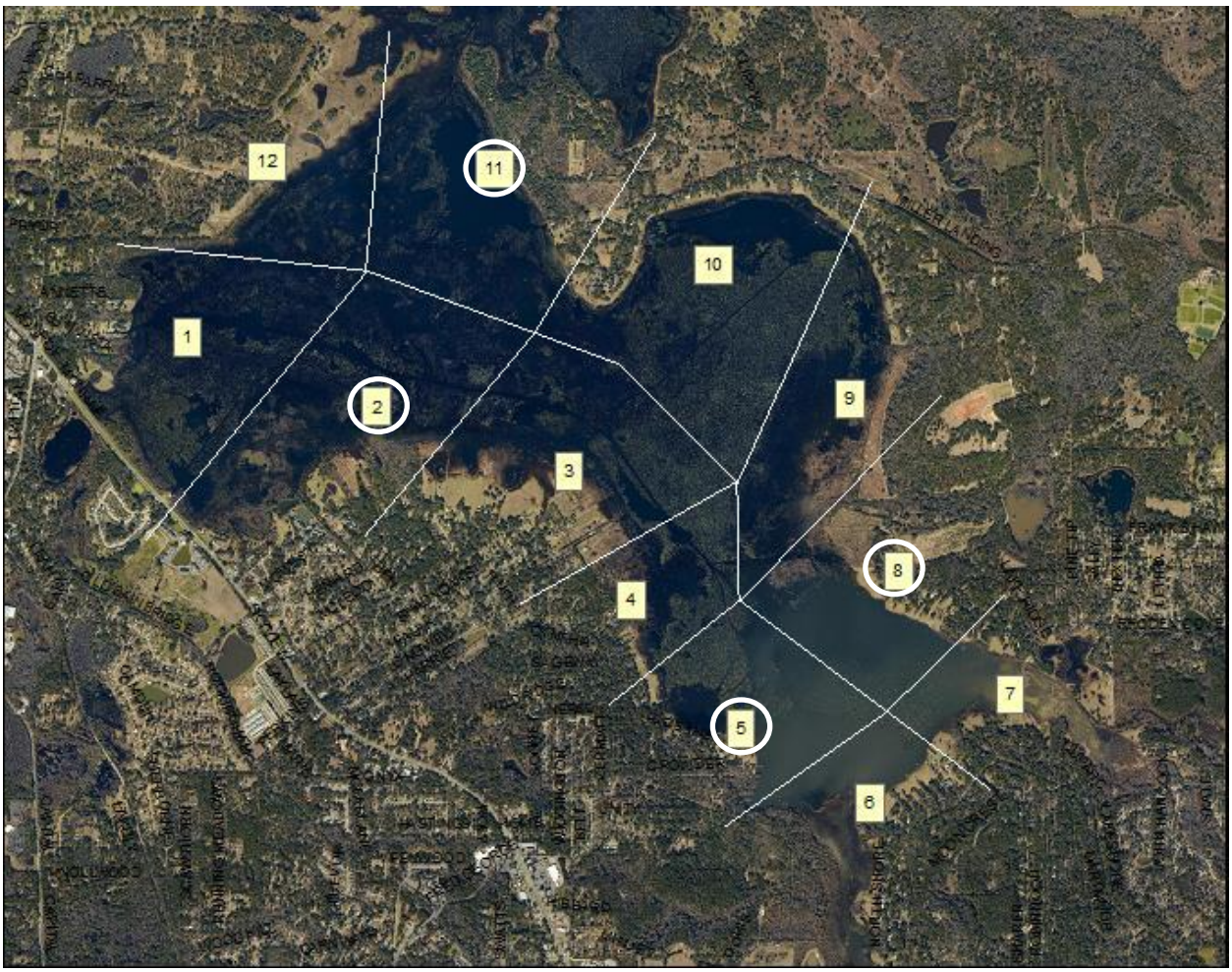

FIGURE 1. Lake Jackson showing unit divisions. Circled numbers denote surveyed units.